

REMARKS

Claim 1-10 are pending.

Claims 1-4 are objected because of the format used. Main claim 1 has been amended to be presented to overcome the objection to its format and claims 1 and 4 are amended to use active verbs. Claims 2 and 3 have been cancelled and the subject matter of these claims placed into claim 1.

Claim 1-9 are rejected under § 112 as being indefinite. Main claim 1, for which the remaining claims 3-9 depend directly or ultimately has been amended to overcome this rejection and should now be considered to be in proper form. Therefore, this rejection has been overcome.

Claims 1-9 are rejected as unpatentable over Farone et al USP 5,597,714. As noted above, amended claim 1 now includes the subject matter of cancelled claims 2 and 3. Claims 4-9 depend from claim 1.

The method of the present invention produces monoaccharides using a simplified process which was three main steps and two sub-steps. In these first step there is the (pre-treatment); the second step(saccharification treatment) which includes step 2A step of solid liquid separation, and the 2B step of sugar-acid separation, and the third step (monosaccharification treatment).

Farone is the prior art referred to as [Patent document 1] in the specification of the present application, which discloses Arkenol method. Farone uses a process of seven steps, as shown in FIG. 4 of the patent, these belong: 1. de-crystallization(1), 2. hydrolysis(1), 3. solid-liquid separation(1), 4. de-crystallization(2), 5. hydrolysis(2), 6. solid-liquid separation(2), and 7. sugar-acid separation.

Comparing the process of the present invention with the process disclosed in Farone, shows that the present invention significantly differs from Farone in the absence of Farone's steps 4.

de-crystallization(2), 5. hydrolysis (2), and 6. solid-liquid separation(2). Also, the third step of the invention of claim 1 of the application (monosaccharification treatment) is not used in Farone.

The present invention has an advantage of using fewer steps than that of Arkenol method which Farone uses as described above.

In addition, according to the present invention, there are advantages in the effects of decreasing the amount of sulfuric acid used in the whole process (see application on page 10, lines 3 to 8), and improving the final monosaccharide conversion rate (see application on page 14, line 20 to page 15, line 1).

Specifically, as is clear from the comparison of Examples 1 to 3 with Comparative Example 1, the monosaccharide conversion rate obtainable from the method of the present invention was not less than 75%, whereas the monosaccharide conversion rate obtainable from an Arkenol method, such as described in Farone, was less than 60% (see page 31, lines 9 to 13).

Accordingly, the present invention has both novelty and advantages over Farone.

As described above, the present invention affords significant advantages in providing high monosaccharide conversion rate using a relatively small amount of sulfuric acid, and also is a simplified process. The present invention is directed to a process different from Farone and provides significant advantages of the method of Farone.

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Claims 1 and 4-9 of the application as now amended patentably distinguish over Farone et al and should be allowed.

Prompt and favorable action is requested by the allowance of the application.

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